

CLAIMS

1. An electrical cable connector assembly, comprising:
 - a plurality of loading fibers;
 - at least one conductor, wherein said at least one conductor has at least one contact point; and
 - wherein a portion of said at least one conductor is woven with at least a portion of said plurality of loading fibers, said loading fibers designed to deliver a contact force at each contact point of said at least one conductor; and
 - wherein another portion of said at least one conductor comprises at least a portion of a cable conductor.
2. The electrical cable connector assembly of claim 1, wherein said plurality of loading fibers are comprised of a non-conducting material.
3. The electrical cable connector assembly of claim 1, wherein said plurality of loading fibers are comprised of an elastic material.
4. The electrical cable connector assembly of claim 1, wherein said plurality of loading fibers are comprised of at least one of the following: nylon, fluorocarbon, polyaramids, polyamids, conductive metal or natural fiber.

5. The electrical cable connector assembly of claim 1 having at least a first and a second conductor, wherein an electrical connection between said first conductor and said second conductor can be established.
6. The electrical cable connector assembly of claim 1, wherein said at least one conductor is self-terminating.
7. The electrical cable connector assembly of claim 1, wherein said at least one conductor has a diameter between approximately 0.0002 and approximately 0.0100 inches, inclusive.
8. The electrical cable connector assembly of claim 1, wherein said at least one conductor is comprised of at least one of the following: solid wire, stranded wire or flat ribbon wire.
9. The electrical cable connector assembly of claim 1, wherein said electrical cable connector assembly comprises at least one of the following: a cable-to-cable connector assembly or a cable-to-board connector assembly.
10. The electrical cable connector assembly of claim 1, wherein said electrical cable connector assembly comprises at least one of the following: a flat ribbon cable connector assembly, a round cable connector assembly or a coaxial cable connector assembly.

11. The electrical cable connector assembly of claim 1, wherein said electrical cable connector assembly comprises a data cable connector assembly having at least one signal path.
12. The electrical cable connector assembly of claim 1, wherein said electrical cable connector assembly comprises a power cable connector assembly.
13. The electrical cable connector assembly of claim 12, wherein said power cable connector assembly comprises at least one of the following: a power circuit or a return circuit.
14. The electrical cable connector assembly of claim 1, further comprising:
an insulator disposed between a first conductor and a second conductor in the area where said first and second conductors are woven with said loading fibers.
15. The electrical cable connector assembly of claim 1, wherein each of said at least one conductor forms a plurality of loops and wherein said plurality of loading fibers contact at least a portion of said loops.
16. The electrical cable connector assembly of claim 1, further comprising:
at least one spring mount having attachment points; and
wherein each of said plurality of loading fibers has a first end and a second end;
and

wherein said first ends of said plurality of loading fibers are coupled to at least a portion of said attachment points of said at least one spring mount.

17. The electrical cable connector assembly of claim 1, further comprising:

a first spring mount having first attachment points;

a second spring mount having second attachment points;

wherein each of said plurality of loading fibers has a first end and a second end;

and

wherein said first ends of said plurality of loading fibers are coupled to at least a portion of said first attachment points of said first spring mount and wherein said second ends of said plurality of loading fibers are coupled to at least a portion of said second attachment points of said second spring mount.

18. The electrical cable connector assembly of claim 1, further comprising:

a first floating end plate having first attachment points;

wherein each loading fiber has a first end and a second end; and

said first ends of said plurality of loading fibers are coupled to at least a portion of said first attachment points of said first floating end plate.

19. The electrical cable connector assembly of claim 18, further comprising a spring arm for engaging said first floating end plate.

20. The electrical cable connector assembly of claim 18, further comprising:

a second floating end plate having second attachment points; and
wherein said second ends of said plurality of loading fibers are coupled to at least
a portion of said second attachment points of said second floating end plate.

21. The electrical cable connector assembly of claim 18, further comprising a secondary spring coupled to said first floating end plate.
22. The electrical cable connector assembly of claim 1, further comprising:
a mating conductor having a contact mating surface; and
wherein an electrical connection can be established between said at least one contact point of said at least one conductor and said contact mating surface of said mating conductor.
23. The electrical cable connector assembly of claim 22, wherein said contact mating surface is curved.
24. The electrical cable connector assembly of claim 23, wherein said curved portion of said contact mating surface is convex.
25. The electrical cable connector assembly of claim 24, wherein said convex curved portion of said contact mating surface is defined by a constant radius of curvature.

26. The electrical cable connector assembly of claim 22, wherein said mating conductor is substantially rod-shaped.
27. The electrical cable connector assembly of claim 1, wherein said at least one conductor comprises a first end portion and a second end portion, and wherein said first end portion of said at least one conductor is woven with a first set of loading fibers to form a first weave and said second end portion of said at least one conductor is woven with a second set of loading fibers to form a second weave.
28. The electrical cable connector assembly of claim 27, further comprising:
- a first mating conductor having a contact mating surface, wherein an electrical connection can be established between at least one contact point located along said first end portion of said at least one conductor and said contact mating surface of said first mating conductor;
 - a second mating conductor having a contact mating surface, wherein an electrical connection can be established between at least one contact point located along said second end portion of said at least one conductor and said contact mating surface of said second mating conductor.
29. The electrical cable connector assembly of claim 1, wherein said at least one conductor comprises a single conductor, and wherein portions of said conductor are woven with a first set of loading fibers to form a first weave and other portions of said conductor are woven with a second set of loading fibers to form a second weave.

30. The electrical cable connector assembly of claim 29, further comprising:
- a first mating conductor having a contact mating surface, wherein an electrical connection can be established between at least one contact point located along said portions of said conductor and said contact mating surface of said first mating conductor;
 - a second mating conductor having a contact mating surface, wherein an electrical connection can be established between at least one contact point located along said other portions of said conductor and said contact mating surface of said second mating conductor.
31. The electrical cable connector assembly of claim 30, wherein said electrical cable connector assembly comprises a power cable connector assembly.
32. An electrical cable connector assembly, comprising:
- a plurality of loading fibers;
 - a plurality of conductors, wherein each conductor has at least one contact point; wherein a portion of each said conductor is woven with at least a portion of said plurality of loading fibers, said loading fibers designed to deliver a contact force at said at least one contact point of each said conductor;
 - a mating conductor having a contact mating surface, wherein an electrical connection can be established between said at least one contact point of each said conductor and said contact mating surface of said mating conductor; and

wherein another portion of each said conductor comprises at least a portion of a cable conductor.